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NONPROVISIONAL PATENT APPLICATION

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Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Transmitted herewith for filing under 37 C.F.R. §1.53(b) is the nonprovisional patent application

For (Title): INTERNET FACSIMILE DEVICE

By (Inventors): Wataru TOMIDA

- ☒ Formal drawings (Figs. 1-14; 14 sheets) are attached.
- ☒ A Declaration and Power of Attorney is filed herewith.
- ☒ An assignment of the invention to BROTHER KOGYO KABUSHIKI KAISHA is filed herewith.
- ☐ An Information Disclosure Statement is filed herewith.
- ☐ A statement to establish small entity status under 37 C.F.R. §§1.9 and 1.27 is filed herewith.
- ☐ A Preliminary Amendment is filed herewith.
- ☐ Please amend the specification by inserting before the first line the sentence --This nonprovisional application claims the benefit of U.S. Provisional Application No. _____, filed _____.--
- ☒ Priority of foreign application No. 10-027779 filed January 26, 1998 in Japan is claimed (35 U.S.C. §119).
- ☐ A certified copy of the above corresponding foreign application(s) is filed herewith.
- ☒ The filing fee is calculated below:

CLAIMS IN THE APPLICATION AFTER ENTRY OF ANY PRELIMINARY AMENDMENT NOTED ABOVE

FOR:	NO. FILED	NO. EXTRA	SMALL ENTITY RATE	SMALL ENTITY FEE	OR	OTHER THAN A SMALL ENTITY RATE	OTHER THAN A SMALL ENTITY FEE
BASIC FEE				$ 380	OR		$ 760
TOTAL CLAIMS	22 - 20	= 2	x 9 =	$	OR	x 18	$ 36
INDEP CLAIMS	5 - 3	= 2	x 39 =	$	OR	x 78	$ 156
☐ MULTIPLE DEPENDENT CLAIMS PRESENTED			+130 =	$	OR	+260	$
			TOTAL	$	OR	TOTAL	$ 952

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- ☒ Check No. 65920 in the amount of $952.00 to cover the filing fee is attached. Except as otherwise noted herein, the Commissioner is hereby authorized to charge any other fees that may be required to complete this filing, or to credit any overpayment, to Deposit Account No. 15-0461. Two duplicate copies of this sheet are attached.
- ☐ This application is entitled to small entity status. DO NOT charge large entity fees to our Deposit Account.

Respectfully submitted,

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INTERNET FACSIMILE DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to an internet facsimile device capable of transmitting and receiving a facsimile via the internet.

2. Description of the Prior Art

Due to the expanded use of the internet in recent years, Japanese Patent-Application Publication (Kokai) Nos. HEI-8-242326 and HEI-9-149189 have proposed internet facsimile devices that can transmit and receive a facsimile via the internet.

According to the internet facsimile device proposed in Japanese Patent-Application Publication (Kokai) No. HEI-8-242326, an image is read from an original document by an image scanner, and facsimile data is generated and temporarily stored. Subsequently, the facsimile data is converted to electronic-mail (e-mail) data and transmitted along with a header to a receiving party via the internet. The header includes a destination address, a source address, and information on its data format and conversion method in which the e-mail data is converted to a character code. The e-mail data received by a receiving party is converted back to the facsimile data and output to a printer so as to be printed out.

In these conventional internet facsimile devices, upon receiving a facsimile, a receiving party can know a sending party of the facsimile. However, the receiving party cannot know what type of facsimile has been received, for example, whether or not it is in urgent.

SUMMARY OF THE INVENTION

In view of the foregoing, it is an object of the present invention to provide an internet facsimile device in which a receiving party can determine general contents and urgency of a received facsimile in a simple manner.

It is another object of the present invention to enable the receiving party to immediately output urgent facsimiles.

In order to achieve the above and other objectives, there is provided an internet facsimile device including a destination specifying means for specifying an electronic mail address of a destination, first data generation means for generating image data by reading an image from an original document, second data generation means for generating electronic mail data based on the image data, internet facsimile transmitting means for transmitting the electronic mail data via an internet to the electronic mail address specified by the destination specifying means, nd title inputting means for inputting a title for the electronic mail data, wherein the internet facsimile

transmitting means comprises title attaching means for attaching the title as an electronic mail title to the electronic mail data before the electronic mail data is transmitted.

There is also provided an internet facsimile device including destination specifying means for specifying one of a facsimile number and an electronic mail address as a destination, first data generating means for generating image data by reading an image from an original document, second data generating means for generating facsimile data based on the image data, third data generating means for generating electronic mail data based on the facsimile data, first facsimile transmitting means for transmitting the facsimile data via a public network to the facsimile number when the facsimile number has been specified as the destination, second facsimile transmitting means for transmitting the electronic mail via an internet to the electronic mail address when the electronic mail address has been specified as the destination, and title inputting means for inputting a title for the electronic mail data when the electronic mail address has been specified as the destination, wherein the second facsimile transmitting means comprises title attaching means for attaching the title to the electronic mail data before the electronic mail data is transmitted.

There is also provided an internet facsimile device including first receiving means for receiving via an internet at least one set of electronic mail data attached with an electronic mail title, title reading means for reading the electronic mail title, title displaying means for displaying the electronic mail title, data selecting means for selecting electronic mail data from the at least one set of the electronic mail data based on the electronic mail title, and image forming means for forming an image based on electronic mail data selected by the data selecting means.

Further, there is provided a method of controlling an internet facsimile device, including the steps of specifying an electronic mail address of a destination, generating image data by reading an image from an original document, generating electronic mail data based on the image data, specifying a title for the electronic mail data, attaching the title as an electronic mail title to the electronic mail data, and transmitting the electronic mail data attached with the electronic mail title via an internet to the electronic mail address.

Still further, there is provided a method of controlling an internet facsimile device, including the steps of receiving electronic mail attached with a header from a remote internet facsimile device, the header

including a title, reading the title from the header, displaying the title, forming an image based on the electronic mail when requested by a user.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

Fig. 1 is a block diagram showing an overall configuration of an internet facsimile system according to embodiments of the present invention;

Fig. 2 is a block diagram showing an overall configuration of an internet facsimile device according to the embodiments of the present invention;

Fig. 3(a) is an explanatory diagram showing a RAM of the internet facsimile device of Fig. 2;

Fig. 3(b) is an explanatory diagram showing a destination data storage area of the RAM of Fig. 3(a);

Fig. 3(c) is an explanatory diagram showing a title storage area of the RAM;

Fig. 4 is a flowchart representing a destination data registration routine executed in the internet facsimile device;

Fig. 5 is a flowchart representing a title registration routine;

Fig. 6 is a first part of a flowchart representing a facsimile transmission routine according to a first embodiment of the present invention;

Fig. 7 is a second part of the flowchart of Fig. 6;

Fig. 8 is a flowchart representing a facsimile receiving routine according to the first embodiment;

Fig. 9 is a flowchart representing a facsimile transmission routine according to a second embodiment of the present invention;

Fig. 10 is a flowchart representing a facsimile transmission routine according to a third embodiment of the present invention;

Fig. 11 is a flowchart representing a facsimile receiving routine according to a fourth embodiment of the present invention;

Fig. 12 is a flowchart representing a facsimile receiving routine according to a fifth embodiment of the present invention;

Fig. 13 is a flowchart representing facsimile receiving routine according to a sixth embodiment of the present invention; and

Fig. 14 a block diagram showing a facsimile communication system according to a modification of the embodiments.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

An internet facsimile device according to preferred embodiments of the present invention will be described while referring to the accompanying drawings.

First, an overall construction of a facsimile communication system according to the embodiments of the present invention will be described.

As shown in Fig. 1, an internet facsimile device 1, an Internal facsimile device 11 which has the same configuration as that of the internet facsimile device 1, and a G3 facsimile device 21 are connected each other via a public network 32. In this embodiment, the internet facsimile device 1 serves as a transmission terminal, and the Internal facsimile device 11 and the G3 facsimile device serve as reception terminals. The internet facsimile device 1 is connected via a local area network (LAN) 2 to an in-house personal computer 3, a printer 4, a mail server 5, and a network router 6. In the same way, the internet facsimile device 11 is connected via a LAN 12 to an in-house personal computer 13, a printer 14, a mail server 15, and a network router 16. The network router 6 and the network router 16 are connected each other via an internet 31. With this configuration, a facsimile can be transmitted and received between the internet facsimile device 1 and the internet facsimile device 11 via the public network 32, and also via the internet 31.

Next, a configuration of the internet facsimile device 1 will be described with reference to Figs. 2 to 3(c). It should be noted that because the internet facsimile device 1

and the internet facsimile device 11 of the present embodiments have the same configuration, an explanation on a configuration of the internet facsimile device 11 will be omitted for avoiding duplication on explanation. As shown in Fig. 2, the internet facsimile device 1 includes a central processing unit (CPU) 41, a read only memory (ROM) 43, a random access memory (RAM) 45, a scanner 47, an encoder 49, a printer 51, a decoder 53, an operation panel 55, a liquid crystal display (LCD) 57, a modem 59, a circuit controller 61, a personal computer interface (PC interface) 63, a mail controller 65, and a LAN controller 67. The circuit controller 61 is connected to the modem 59 and further to the public network 32. The LAN controller 67 is connected to the LAN 2.

The CPU 41 executes an overall control of the internet facsimile device 1, and executes various control processes, such as transmission and reception of a facsimile, registering destination addresses, registering titles, and the like, according to control programs stored in the ROM 43. Programs and data necessary for these control processes are prestored in the ROM 43. As shown in Fig. 3(a), the RAM 45 includes a work memory 45a, a transmission/reception data storage area 45b for use in facsimile transmission and reception control, a destination data storage area 45c, and a title recording area 45d. The scanner 47 is for reading

an image from an original document at facsimile transmission. The encoder 49 is for encoding image data into G3 compressed image data as facsimile data. The decoder 53 is for decoding facsimile data into image data. The printer 51 is for forming an image on a recording sheet based on image data decoded by the decoder 53. An operator performs input operations on the operation panel 55 for registering destination addresses, specifying destinations, inputting or selecting titles, and the like. The LCD 57 is for displaying various messages, such as operational procedures and error messages. The LCD 57 also functions as a touch panel by displaying one-touch keys at such operations as registering addresses and other information on receiving parties.

The modem 59 is for performing facsimile transmissions and receptions between the public network 32 via the circuit controller 61. The circuit controller 61 is for transmitting dial signals for the public network 32 and responding to call signals from the public network 32. The PC interface 63 is for connecting with a personal computer.

The mail controller 65 is for converting facsimile data into e-mail data so that a facsimile can be transmitted as an e-mail via the internet 31. More specifically, the mail controller 65 converts binary image data, that is, facsimile data, into text coded image data, that is, e-mail

data, and attaches a header to the e-mail data. The header includes a mail address of a reception party and the like. Also, the mail controller 65 converts e-mail data received via the internet 31 back into facsimile data. Thus converted facsimile data is, then, decoded by the decoder 53 and output to the printer 51 so as to be printed out on a recording sheet.

The LAN controller 67 is for controlling input and output of e-mail data between the LAN 2 and the internet facsimile device 1.

According to the present embodiments, as shown in Fig. 3(b), the destination data storage area 45c of the RAM 45 stores destination data. The destination data includes names of receiving parties and corresponding facsimile number and e-mail addresses. That is, when a receiving party is capable of receiving a facsimile both via the public network 32 and the internet 31, both a facsimile number and an e-mail address can be stored under single name of the receiving party.

As shown in Fig. 3(c), the title recording area 45d includes a default title area 45e and a user's area 45f. In the present embodiment, four default titles, that is, "You have a facsimile", "Facsimile: ASAP!", "Facsimile: please call", and "Facsimile: confidential", are prestored in the default title area 45e. On the other hand, a user can

register desired titles in the user's area 45f.

Next, control processes performed in the internet facsimile device 1 will be described. The control processes includes a destination data registration process, a title registration process, a facsimile transmission process, and a facsimile receiving process.

First, the destination data registration process will be described while referring to the flowchart shown in Fig. 4. The destination data registration routine is executed when required by a user operating the operation panel 55.

When the process begins, one-touch keys for a first destination to n-th destination are displayed in the LCD 57 in S10. It should be noted that if the LCD 57 is not large enough to display all of the one-touch keys at one time, the user can control to scroll up and down by operating scroll keys provided to the operation panel 55.

Next in S20, the user selects one of the one-touch keys displayed in the LCD 57. Then, in S30, the user enters a name of a receiving party. If the receiving party has a facsimile number (YES:S40), then in S50, the user inputs the facsimile number, and the program proceeds to S60. On the other hand, if the receiving party does not have a facsimile number (NO:S40), the process directly proceeds to S60 without executing the process of S50. Then, if the receiving party has an e-mail address (YES:S60), then the

user enters the e-mail address in S70, and the process proceeds to S80. On the other hand, if the receiving party does not have an e-mail address (NO:S60), the process directly proceeds to S80 without S70. Hence, the user has to input at least one of a facsimile data and an e-mail address of a receiving party. That is, the user has to input a) only a facsimile number, b) only an e-mail address, or c) both a facsimile number and an e-mail address, in the processes of S40 to S70.

Then, in S80, the LCD 57 displays data inputted by the user in the previous processes, and the user is prompted, in S90, to indicate whether or not the displayed data should be registered. If the user indicates that the data should be registered (YES:S90), then in S100, the data is registered and stored in the destination data storage area 45c, and the present process is ended. On the other hand, if not (NO:S90), then the process returns to S30, enabling the user to re-enter a name and other data.

Next, the title registration process for registering titles will be described while referring to the flowchart shown in Fig. 5. The title is attached to e-mail data to be transmitted as a facsimile via the internet 31. The title registration routine is executed when requires by a user operating the operation panel 55.

It should be noted that, as shown in Fig. 3(c),

default titles are prestored in the default title area 45e. Therefore, titles registered during the title registration process are stored in the user's area 45f. In this embodiment, the user's area 45f can register a fifth title to a tenth title.

When the process is started, first in S110, the LCD 57 displays one-touch keys for the fifth to tenth titles, and also displays title areas displaying corresponding titles. In the state shown in Fig. 3(c), no title is presently stored in the user's area 45f. Therefore, in this case, the fifth to tenth one-touch keys are displayed along with blank title areas.

Next, the user selects, in S120, one of the one-touch keys displayed in the LCD 57, and then in S130, inputs a desired title using the operation panel 55. Next, it is determined, in S140, whether or not a different title is presently stored in association with the selected one-touch key. If so (YES:S140), the LCD 57 displays in S150 a message, such as "Overwrite previous entry?", in order to confirm the user whether or not the user wishes to overwrite the currently-stored title. If the user indicates "yes" in S150 (YES:S150), then in S160, the new title entered in S130 is stored in association with the selected one-touch key in place of the currently stored title, and the present process is ended. On the other hand, if the user answers "no" to

the above question (NO:S150), then the process returns to S120, allowing the user to reselect a different one-touch key.

On the other hand, if S120 results in a negative determination (NO:S140), then in S170, the LCD 57 displays a message in S170 prompting the user for confirmation. If the user indicates to register the input title (YES:S170), then the title is registered and stored in S160, and the present process is ended. On the other hand, if the user indicates not to register the input title (NO:S170), then the process returns to S130, allowing the user to re-enter a title.

Here, if the user wishes to delete a currently stored title, the user can press a return key in S130 without inputting a title. Then the user can indicate "yes" in S150.

As described above, according to the embodiment of the present invention, titles that the user frequently uses can be stored in the user's area 45f in association with one-touch keys. Also, the titles can be changed by being overwritten, and also new titles can be added. It should be noted that a stored title can be deleted by the user pressing a delete key after selecting a desired one-touch key.

Next, the facsimile transmission routine will be described with reference to the flowcharts shown in Figs. 6 and 7. The facsimile transmission routine is executed when

the user instructs a facsimile transmission by operating the operation panel 55.

First, in S210, the LCD 57 displays a message inquiring the user whether the user wishes to specify a receiving party by directly inputting a destination or by using one-touch keys. If the user elects to specify by using one-touch keys (ONE-TOUCH KEY:S210), the process proceeds to S220, wherein one-touch keys corresponding to names of receiving parties are displayed based on the data stored in the destination data storage area 45c. and the CPU 41 waits for a next command.

At this time, if all of the one-touch keys are not displayed at the same time, the user can control scrolling by operating scroll keys and the like in the operation panel 55.

If the user selects a receiving party by pressing corresponding one of the one-touch keys (YES:S230), the LCD 57 displays in, S240, destination data stored in association with the selected one-touch key. At this time, if both a facsimile number and an e-mail address of the selected receiving party are stored, the LCD 57 displays the facsimile number and the e-mail address in this order.

If both the facsimile number and the e-mail address are being stored (YES:S250), then, the program proceeds to S260, wherein the user is prompted to select either the

facsimile number or the e-mail address. If the user selects the facsimile number (FACSIMILE:S260), then the user is directed, in S270, to set the original document. On the other hand, if the user selects the e-mail address (E-MAIL:S260), then the process proceeds to S310. If only one of the facsimile number and the e-mail address is being stored (NO:S250), then the CPU 41 determines in S255 which one of the facsimile number and the e-mail address is being stored. If it is determined in S255 that the facsimile number is being stored (FACSIMILE:S255), the program proceeds to S270. On the other hand, if it is determined that the e-mail address is being stored, the process proceeds to S310.

If the user set the original document in S270, then in S280, the scanner 47 reads an image from the original document, and generates image data. The encoder 49 encodes, in S290, the image data into G3 compressed image data, that is, facsimile data, and transmitted, in S300, to the G3 facsimile device 21 via the modem 59, the circuit controller 61, and the public network 32. Then, the present process is ended.

In S310, the user selects a desired title selection method. In the present embodiment, the user can select one of the following title selection methods: 1) a direct method in which the user inputs the title directly from the

operation panel 55, 2) a one-touch input method in which the user selects a title using a one-touch key from the titles stored in the title recording area 45d, and 3) a fixed input method in which the user selects a fixed title such as "You have a facsimile" stored in the top area of the default title area 45e.

When the one-touch input method is selected (ONE-TOUCH:S320), the process proceeds to S320, wherein the LCD 57 displays a list of the titles stored in the title recording area 45d along with respective one-touch keys. The program waits in S330 for the user to select a desired title by touching a corresponding one-touch key. At this time, if the entire list cannot be displayed in the LCD 57, the user can control to scroll by operating the scroll keys and the like provided to the operation panel 55.

If the user select a desired title (YES:S330), then in S340, the user is instructed to set the original document. The scanner 47 reads, in S350, an image from the original document, and image data is generated. The image data is, then in S360, encoded into G3 compressed image data by the encoder 49. Because the G3 compressed image data cannot be transmitted via the internet 31, the G3 compressed image data is, in S370, further converted into text coded image data, that is, e-mail data, by the mail controller 65. Further in S380, the mail controller 65 creates a header

which includes the selected e-mail address, the selected title, data on the sending party, data necessary for outputting a message to a printer or a viewer on a receiving terminal, and the like. Then in S390, the e-mail data attached with the header is output to the LAN controller 67 and transmitted to the internet 31 via the LAN 2 and the network router 6. Then, the present process is ended.

If the user selects the direct input method (DIRECT:S310), it is determined, in S410, whether or not the user has completed inputting a title through the operation panel 55. If so (YES:S410), the process proceeds to S340.

If the user selects the fixed input method (FIXED:310, then in S420, a fixed title, such as "You have a facsimile", is automatically selected. Then, the process proceeds to S340.

Next, the facsimile receiving process will be described while referring to the flowchart shown in Fig. 8.

The facsimile receiving process is automatically executed periodically. In S510, it is determined whether or not the mail server 15 has received any e-mail addressed to the internet facsimile device 11. If so (YES:S510), then in S520, the received e-mail data is stored into the transmission/reception data storage area 45b provided in the RAM 45. Further in S530, a title and a name of a sending party are stored as receiving report in a predetermined

communication management data storage section within the transmission/reception data storage area 45b. In the present embodiment, a facsimile received via the internet 31 is not immediately output to the printer 14. Instead, mail data remains stored in the transmission/reception data storage area 45b, and the internet facsimile device 11 is kept in S540 in a standby state for waiting for a user to input a next command.

[0065]

When the user inputs, in S540, a command to display the receiving report, then in S550, the LCD 57 displays the receiving report which includes the name of the sending party and the title. In S560, the internet facsimile device 11 waits for an output command from the user. The user examines the receiving report and determines which facsimile to print out, and inputs output command by, for example, selecting a facsimile by operating cursor keys provided in the operation panel 55, and then pressing an output key in the operation panel 55.

When the user inputs the output command (YES:S560), then in S570, corresponding e-mail data is read from the transmission/reception data storage area 45b. Then, in S580, the mail controller 65 converts the e-mail data back into G3 compressed image data, and further in S590, the decoder 53 decodes the G3 compressed image data into image data in a

form capable of being printed. In S600, the printer 51 is driven to print the image data onto a recording sheet, and the process is ended.

As described above, the internet facsimile device of the present embodiment is capable of transmitting a facsimile via either the internet or the public network. Since a facsimile is transmitted with a title via the internet, a receiving party can determine from the title whether or not the facsimile should be printed or should be read immediately. Also, the receiving party can delay printing of a less important facsimile, such as direct mail, until a later time, or leave such facsimile not to be printed out at all. Further, the sending party can specify a title by selecting from previously recorded titles using one-touch keys, and also can use a default fixed title. Therefore, the title input process can be simplified. Moreover, by storing receiving report, the receiving party can output the receiving report as a communication management report at a later time. Therefore, facsimile communication can be managed more precisely compared with in a normal G3 facsimile device. By receiving a facsimile attached with a title, a receiving party can avoid unnecessary printing of a facsimile, and also can output an urgent facsimile more quickly.

Next, a facsimile transmission process according to a

second embodiment of the present invention will be described while referring to the flowchart shown in Fig. 9. The process is started when the user inputs an instruction to transmit a facsimile via the internet 31 by operating the operation panel 55.

First in S710, the user specifies an e-mail address of a receiving party by either in the direct input method or one-touch input method described above. Next, in S720, the user is prompted to set the original document, and in S730, the scanner 47 reads an image from the original document. At this time, enlarged character arrays on a first page of the original document are recognized, in S740, by an OCR function. Then, in S750, the character arrays are extracted as a title of the facsimile. The image data read from the original document is, in S760, encoded by the encoder 49 into G3 compressed image data. The G3 compressed image data is converted, in S770, by the mail controller 65 into a text coded image data, that is, e-mail data, capable of being transmitted via the internet 31. In S780, the title which has been automatically extracted in S750 is also sent to the mail controller 65, and a header is created. The header includes the title, the e-mail address of the selected receiving party, data on the sending party, and data necessary for performing print output or displaying the data in a viewer. After the header is attached to the e-mail

data, the e-mail data is sent to the LAN controller 67 and, in S790, transmitted to the internet 31 via the LAN 2 and the network router 6.

According to the above-described second embodiment, because a title is automatically extracted from an original document, a sending party does not need to input a title, thereby minimizing operations placed on a user.

Next, a facsimile transmission process according to a third embodiment of the present invention will be described while referring to the flowchart shown in Fig. 10. The process is started when the user inputs an instruction to transmit a facsimile via the internet 31 by operating the operation panel 55.

First in S810, the user specifies an e-mail address of a receiving party in the indirect input method or the one-touch input method. Next in S820, the user sets the original document, and in S830, the scanner 47 reads an image from the original document and generates image data. Then in S840, the image data is encoded by the encoder 49 into G3 compressed image data, and further in S850, converted into text coded image data, that is, e-mail data, by the mail controller 65. The user is, in S860, prompted to input a title to be attached to the e-mail data. Same as in the first embodiment, the user can input a title in the direct input method or the one-touch input method. If the

user inputs a title according to the instruction given in S860 (INPUT:S870), the inputted title is transmitted to the mail controller 65, and in S880, a header is generated. The header includes the title, the e-mail address, data on the sending party, data necessary for printing or displaying data at a receiving terminal, and the like. Then in S890, the e-mail data with the header is sent to the LAN controller 67, and transmitted as a facsimile to the internet 31 via the LAN 2 and the network router 6.

On the other hand, if the user does not input a title in S870 (IGNORED:S870), the program proceeds to S875, wherein first one of the default titles stored in the default title area 45e is forcefully set as a title. Then, the program proceeds to S880.

As described above, according to the third embodiment, a predetermined one of the default titles is automatically attached to a facsimile when the user ignores or forgets to input or select a title. Therefore, a facsimile is never transmitted via the internet without a title. In this way, a receiving party can obtain a title of any kind, thereby preventing the receiving party from overlooking an important facsimile. Also, the function of the present invention will not be wasted.

Next, a facsimile receiving process according to a fourth embodiment will be described while referring to the

flowchart shown in Fig. 11.

The internet facsimile device 11 periodically executes process of S910 to determine whether or not the mail server 15 has received any e-mail data addressed to the internet facsimile device. If so (YES:S910), then in S920, the e-mail data is stored in the transmission/reception data storage area 45b provided in the RAM 45. Then in S930, a title and a name of a sending party included in a header attached to the e-mail data are stored as a receiving report in a predetermined communication management data storage section of the transmission/reception data storage area 45b. Next in S940, the CPU 41 checks the title against data which is prestored in the ROM 43, and determined in S950 whether or not the facsimile should be immediately printed out. For example, if the title includes such character arrays as "immediately", "important," "urgent", or "please respond", then the message is set for immediate printout.

If S950 results in an affirmative determination (YES:S950), then in S960, the receiving party is notified of the urgency by a beep or the like. On the other hand, if S950 results in a negative determination (NO:S950), the process proceeds to S970, wherein the facsimile received via the internet 31 is kept in the transmission/reception data storage area 45b, and the internet facsimile device 11 waits in a standby state for the user to input a next command.

The processes of S970 and the following steps are similar to that of S540 and the following steps in the flowchart shown in Fig. 8. However, when the user is notified of the arrival of an urgent facsimile in S960, and the user inputs a command to display the receiving report (YES:S970), then in S980, the LCD 57 displays the receiving report which includes the title and data on the sending party. Further in S990, the title of the urgent facsimile is displayed in a different color from other titles or made to flash so that the receiving party can easily distinguish the urgent facsimile from other facsimile.

If the user inputs an output command for a desired facsimile (YES:S1000), then in S1010, corresponding e-mail data is read from the transmission/reception data storage area 45b, and in S1020, converted into the G3 compressed image data by the mail controller 65, and further in S1030, decoded by the decoder 53. Then, in S1040, the printer 51 prints out the image data on a recording sheet.

According to the fourth embodiment described above, when an urgent facsimile is received via the internet, the internet facsimile device notifies a receiving party on this urgency. Therefore, the user can immediately print out the facsimile. In this way, urgent communication can be effectively performed. Further, by changing the display format of a title corresponding to an urgent facsimile in

S990, a user can easily recognize the urgent facsimile even when a plurality of facsimile has been received.

Next, a facsimile receiving process according to a fifth embodiment will be described while referring to the flowchart shown in Fig. 12.

The CPU 14 periodically determines, in S1110, whether or not the mail server 15 has received any e-mail addressed to the internet facsimile device 11 via the internet 31. If so (YES:S1110), then in S1120, the e-mail data is stored into the transmission/reception data storage area 45b provided in the RAM 45. Then in S1130, a title and a name of a sending party are stored as a receiving report in a prescribed communication management data storage section of the transmission/reception data storage area 45b. Next, the CPU 14 checks, in S1140, the title against data which is prestored in the ROM 43, and determines, in S11650, whether or not the facsimile is in an urgent. For example, S1150 can result in an affirmative determination if the title includes such character arrays as "immediately", "important", "urgent", "please respond", and the like.

If S1150 results in an affirmative determination (YES:S1150), then in S1160, the user is notified of that the facsimile should be urgently printed out by a beep or the like. Then in S1170, the corresponding e-mail data is immediately read from the transmission/reception data

storage area 45b without waiting for an instruction from the user. The e-mail data is converted, in S1180, back to the G3 compressed image data by controller 65, and in S1190, decoded by the decoder 53, and further in S1200, printed by the printer 51 on a recording sheet.

On the other hand, S1150 results in a negative determination (NO:S1150), then the program waits for the user to input an instruction to display the receiving report in S1210. If the user inputs the instruction (YES:S1210), then the receiving report is displayed in S1220 and the program proceeds to S1230 and wait for the user to input an output command. If the user input the output command (YES:S1230), then the process proceeds to S1170.

According to the fifth embodiment described above, when an urgent facsimile is received via the internet, a receiving party is notified of its urgency. Because the facsimile is automatically printed out, the internet facsimile device can further easily and reliably handle urgent facsimile.

Next, a facsimile receiving process according to a sixth embodiment will be described while referring to the flowchart shown in Fig. 13. The facsimile receiving process in this embodiment is executed by the personal computer 13 connected to the LAN 12 when a facsimile addressed to an individual at the receiving terminal is received.

In this embodiment, the personal computer 13 periodically checks, in S1310, the mail server 15 for an incoming facsimile addressed to the individual using the personal computer 13. It should be noted that the user of the personal computer 13 has to previously register a personal e-mail address on the personal computer 13 so that the personal computer 13 can check for an incoming facsimile on the mail server 15 according to the registered e-mail address.

If S1310 results in an affirmative determination (YES:S1310), then in S1320, the e-mail is displayed as a mail list on a display of the personal computer 13. As described above, since a title is attached to e-mail data, the user of the personal computer 13 can be nofitied of that a new facsimile has been received by examining the mail list. Moreover, since the user can obtain the general contents of the facsimile from the displayed titles, the user can easily determine whether the facsimile should be immediately printed out or displayed in the display of the personal computer 13 using a viewer function.

After displaying the mail list in the display of the personal computer 13 in S1320, the program waits, in S1330, for a next instruction from the user. If the user input an output command (YES:S1330), then in S1340, the personal computer 13 prompts the user to select whether to print out

the data or to display in the display. If the user select to print out (PRINT:S1340), then in S1350 corresponding data is read from the mail server 15. Next in S1360, the data is converted to image data capable of being printed. In S1370, the image data is transmitted to the printer 14, and a printing process is executed. Then, the present process is ended.

On the other hand, if the user selects to display (DISPLAY:S1340), then in S1380, the corresponding data is read from the mail server 15, and in S1390, converted to image data capable of being displayed by a viewer function. The image data is displayed in S1400, and the program proceeds to S1410. If the user determines to obtain a hardcopy of the image data (YES:S1410), the image data is sent to the printer 14 in S1420, and a hardcopy is printed out. Then, the program is ended.

According to the embodiments described above, because the user is prompted to specify a title before transmitting a facsimile via the internet, the function of the present invention will be effectively achieved. Here, it is possible to control not to allow to perform a facsimile transmission unless a user specifies a title.

Also, image data read from an original document can be converted into facsimile data and then, into e-mail data. Therefore, if a public network is congested when a user

attempts to transmit a facsimile via the public network, the facsimile can be transmitted via the internet by converting facsimile data into e-mail data without image data is read from the original document once again.

While the invention has been described in detail with reference to specific embodiments thereof, it would be apparent to those skilled in the art that many modifications and variations may be made therein without departing from the spirit of the invention, the scope of which is defined by the attached claims.

For example, the embodiments described above applied the invention to a system configuration as shown in Fig. 1. However, the present invention can also be applied to a system configuration as shown in Fig. 14. In this configuration, the internet facsimile device 1 and the internet facsimile device 11 are connected to providers 71 and 72, respectively, via public networks. Facsimile transmissions and receptions are conducted via the providers 71, 72 and using the internet 31.

Further, in the embodiments described above, titles are input in the one-touch key input method. However, it is also possible to input titles by reading a bar code associated with a title from a bar code list. Further, rather than performing an enlarged character recognition as a method to automatically set a title, it is also possible

to set an underlined character array as the title; to set a character array inside a prescribed area as the title; or to set the title under some other condition.

Further, when transmitting a facsimiles via the internet in the embodiments described above, image data is first converted to facsimile data and then, into e-mail data. However, the image data can be converted directly into e-mail data. Further, received e-mail data can be directly converted back into image data capable of being printed. In this case, a device including with a G3 facsimile unit and an internet facsimile unit connected in parallel in a single unit can be provided with a title inputting function of the present invention. Here, the G3 facsimile unit converts image data into G3 compressed data as facsimile data; transmits the facsimile via a public network; and prints out an image based on the facsimile data received via the public network. The internet facsimile unit converts image data directly into e-mail data; transmits the e-mail data via the internet; and directly converts received e-mail data into image data capable of being printed.

What is claimed is:

1. An internet facsimile device comprising:

destination specifying means for specifying an electronic mail address of a destination;

first data generation means for generating image data by reading an image from an original document;

second data generation means for generating electronic mail data based on the image data;

internet facsimile transmitting means for transmitting the electronic mail data via an internet to the electronic mail address specified by the destination specifying means; and

title inputting means for inputting a title for the electronic mail data,

wherein the internet facsimile transmitting means comprises title attaching means for attaching the title as an electronic mail title to the electronic mail data before the electronic mail data is transmitted.

2. The internet facsimile device according to claim 1, wherein the title inputting means comprises title input prompting means for prompting a user to input a title.

3. The internet facsimile device according to claim 2, wherein the title inputting means comprises default title storing means for storing a default title, and default title setting means for setting the default title as the

electronic mail title when a user does not input a title.

4. The internet facsimile device according to claim 2, wherein the title inputting means further comprises title storing means for storing at least one title, and title selecting means for selecting a title from the at least one title as the electronic mail title.

5. The internet facsimile device according to claim 4, wherein the title inputting means comprises default title storing means for storing a default title, and default title setting means for setting the default title as the electronic mail title when a user does not select a title from the at least one title.

6. The internet facsimile device according to claim 4, further comprising title editing means for editing the at least one title stored in the title storing means.

7. The internet facsimile device according to claim 6, wherein the title editing means adds a new title to the at least one title.

8. The internet facsimile device according to claim 6, wherein the title editing means modifies selective one of the at least one title.

9. The internet facsimile device according to claim 6, wherein the title editing means deletes selective one of the at least one title.

10. The internet facsimile device according to claim

1, wherein the title inputting means comprises default title storing means for storing a default title, and default title setting means for setting the default title as the electronic mail title.

11. The internet facsimile device according to claim 1, wherein the title inputting means comprises character recognition means for recognizing character data from the image data, the character data being read from a predetermined position of the original document, and automatic title setting means for setting the character data as the electronic mail title.

12. An internet facsimile device comprising:

destination specifying means for specifying one of a facsimile number and an electronic mail address as a destination;

first data generating means for generating image data by reading an image from an original document;

second data generating means for generating facsimile data based on the image data;

third data generating means for generating electronic mail data based on the facsimile data;

first facsimile transmitting means for transmitting the facsimile data via a public network to the facsimile number when the facsimile number has been specified as the destination;

second facsimile transmitting means for transmitting the electronic mail via an internet to the electronic mail address when the electronic mail address has been specified as the destination; and

title inputting means for inputting a title for the electronic mail data when the electronic mail address has been specified as the destination,

wherein the second facsimile transmitting means comprises title attaching means for attaching the title to the electronic mail data before the electronic mail data is transmitted.

13. The internet facsimile device according to claim 12, wherein the third data generating means comprises format converting means for converting a format of the facsimile data into a format of electronic mail data.

14. An internet facsimile device comprising:

first receiving means for receiving via an internet at least one set of electronic mail data attached with an electronic mail title;

title reading means for reading the electronic mail title;

title displaying means for displaying the electronic mail title;

data selecting means for selecting electronic mail data from the at least one set of the electronic mail data

based on the electronic mail title; and

image forming means for forming an image based on electronic mail data selected by the data selecting means.

15. The internet facsimile device according to claim 14, further comprising second receiving means for receiving facsimile data via a public network, and data converting means for converting the at least one set of the electronic mail data into facsimile data, wherein the image forming means forms an image based on the facsimile data received via the public network and on the facsimile data converted from the at least one set of the electronic mail data.

16. The internet facsimile device according to claim 14, further comprising priority determining means for determining whether or not each one of the at least one set of electronic mail data has a high priority based on a corresponding electronic mail title, and notifying means for notifying the user of electronic mail data having the high priority.

17. The internet facsimile device according to claim 14, further comprising priority determining means for determining whether or not a priority of each one of the at least one set of electronic mail data is high based on a corresponding electronic mail title, wherein the image forming means forms an image based on the electronic mail data which has been determined to have a high priority.

18. The internet facsimile device according to claim 17, further comprising notifying means for notifying a user when the image forming means forms an image based on the electronic mail data which has been determined to have a high priority.

19. The internet facsimile device according to claim 17, wherein the priority determining means determines that a priority is high when corresponding electronic mail title contains a predetermined character.

20. A method of controlling an internet facsimile device, comprising the steps of:

specifying an electronic mail address of a destination;

generating image data by reading an image from an original document;

generating electronic mail data based on the image data;

specifying a title for the electronic mail data;

attaching the title as an electronic mail title to the electronic mail data; and

transmitting the electronic mail data attached with the electronic mail title via an internet to the electronic mail address.

21. A method of controlling an internet facsimile device, comprising the steps of:

receiving electronic mail attached with a header from a remote internet facsimile device, the header including a title;

reading the title from the header;

displaying the title; and

forming an image based on the electronic mail when requested by a user.

22. The method according to claim 21, further comprising the steps of:

determining whether or not the electronic mail belongs to a predetermined group based on the title; and

notifying an user of an urgent mail when the electronic mail belongs to the predetermined group.

ABSTRACT OF DISCLOSURE

A facsimile can be transmitted via both the internet and the public network. An image is read from an original document, and image data is generated. The image data is converted into facsimile data, and further corded into e-mail data. The e-mail data is transmitted as a facsimile along with a header via the internet. The header includes a title selected by a user. When a receiving party receives the facsimile via the internet, the receiving party can obtain the general contents of the facsimile and determine its urgency from the title.

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FIG. 1

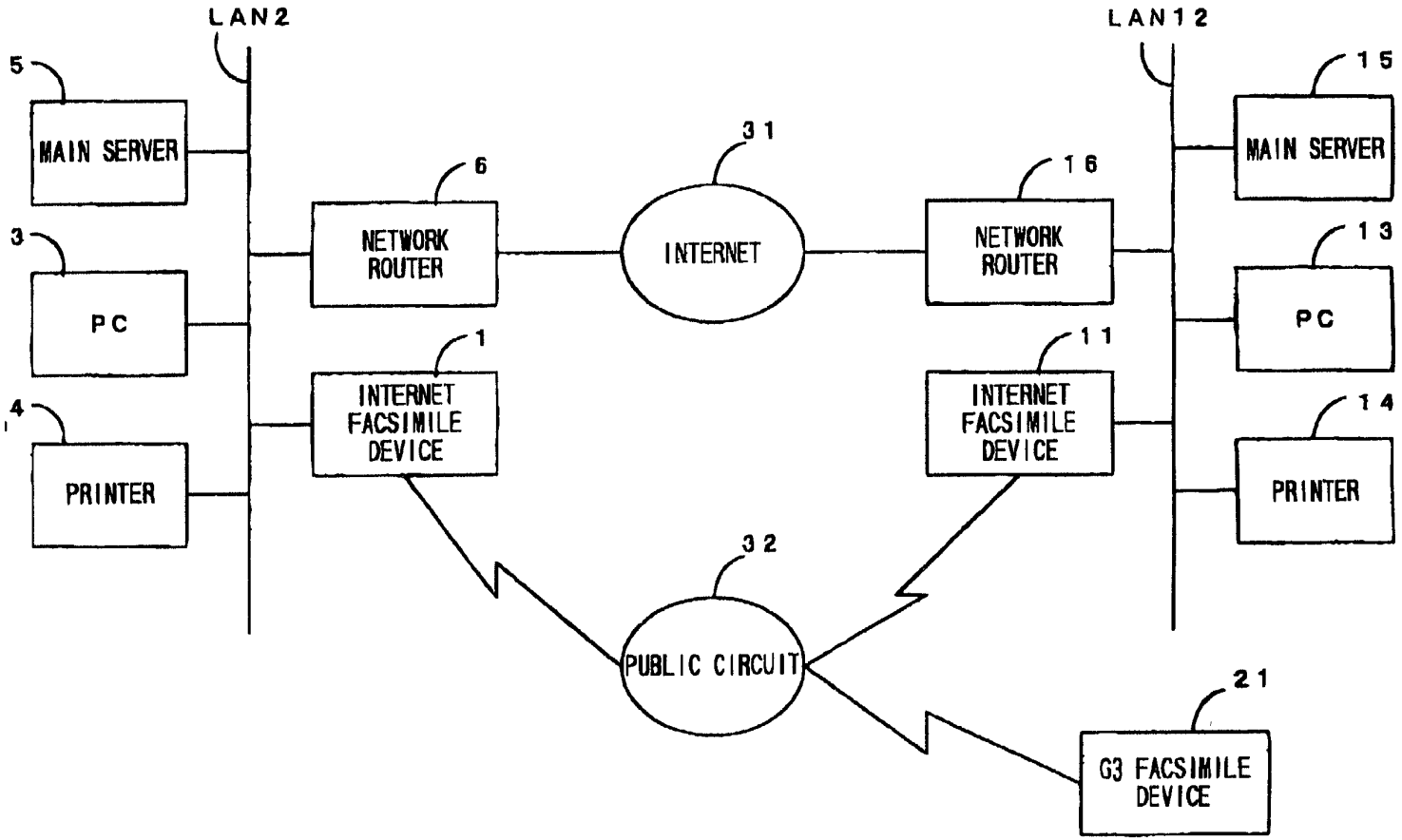


FIG. 2

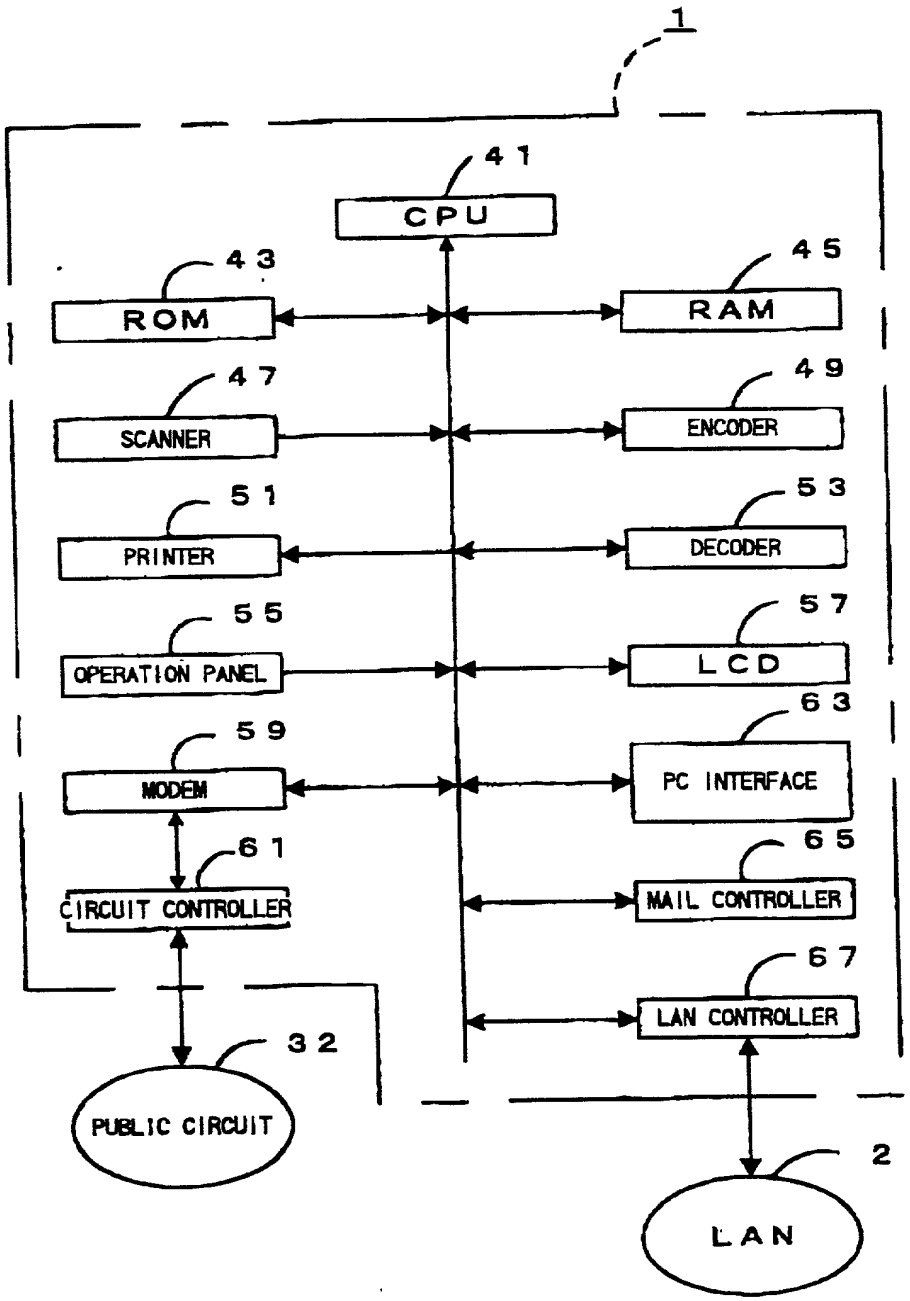

1
41
CPU
43
ROM
45
RAM
47
SCANNER
49
ENCODER
51
PRINTER
53
DECODER
55
OPERATION PANEL
57
LCD
59
MODEM
63
PC INTERFACE
61
CIRCUIT CONTROLLER
65
MAIL CONTROLLER
67
LAN CONTROLLER
32
PUBLIC CIRCUIT
2
LAN

FIG. 3 (a)

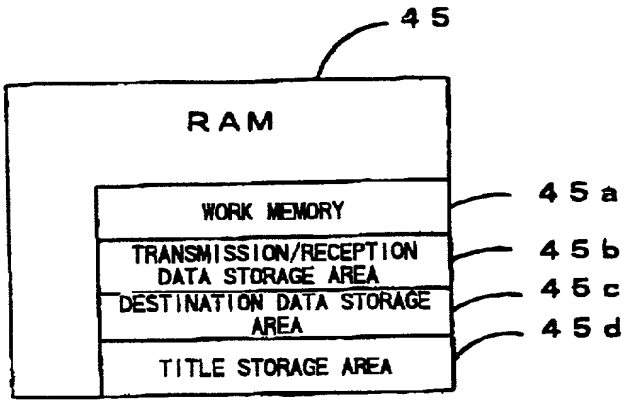
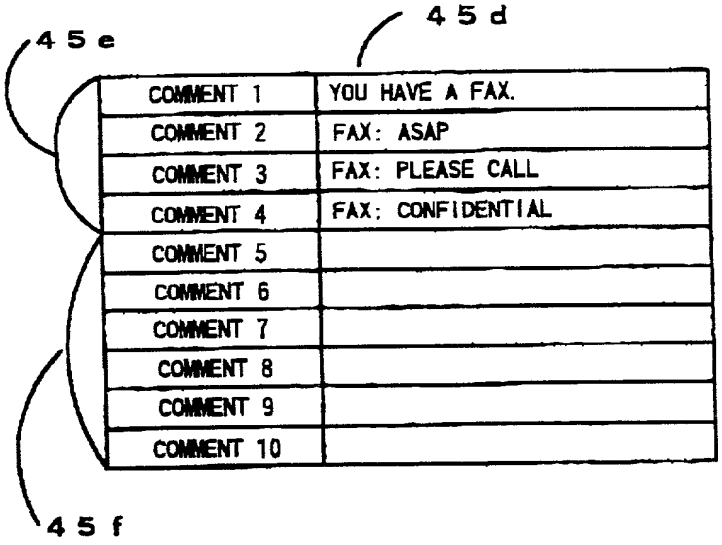


FIG. (b)

45c

NAME 1	03-****-****
	aaa@***.co.jp
NAME 2	06-***-****
	bbb@***.co.jp
NAME 3	052-***-****
NAME 4	0564-**-****
	ccc@***.or.jp
NAME 5	0532-**-****
	ddd@***.ne.jp
NAME 6	0775-**-****
	eee@***.ne.jp
.	.
.	.
.	.
.	.
NAME n	FACSIMILE NUMBER n
	E-MAIL ADDRESS n

FIG. 3 (c)



COMMENT 1	YOU HAVE A FAX.
COMMENT 2	FAX: ASAP
COMMENT 3	FAX: PLEASE CALL
COMMENT 4	FAX: CONFIDENTIAL
COMMENT 5	
COMMENT 6	
COMMENT 7	
COMMENT 8	
COMMENT 9	
COMMENT 10	

FIG. 4

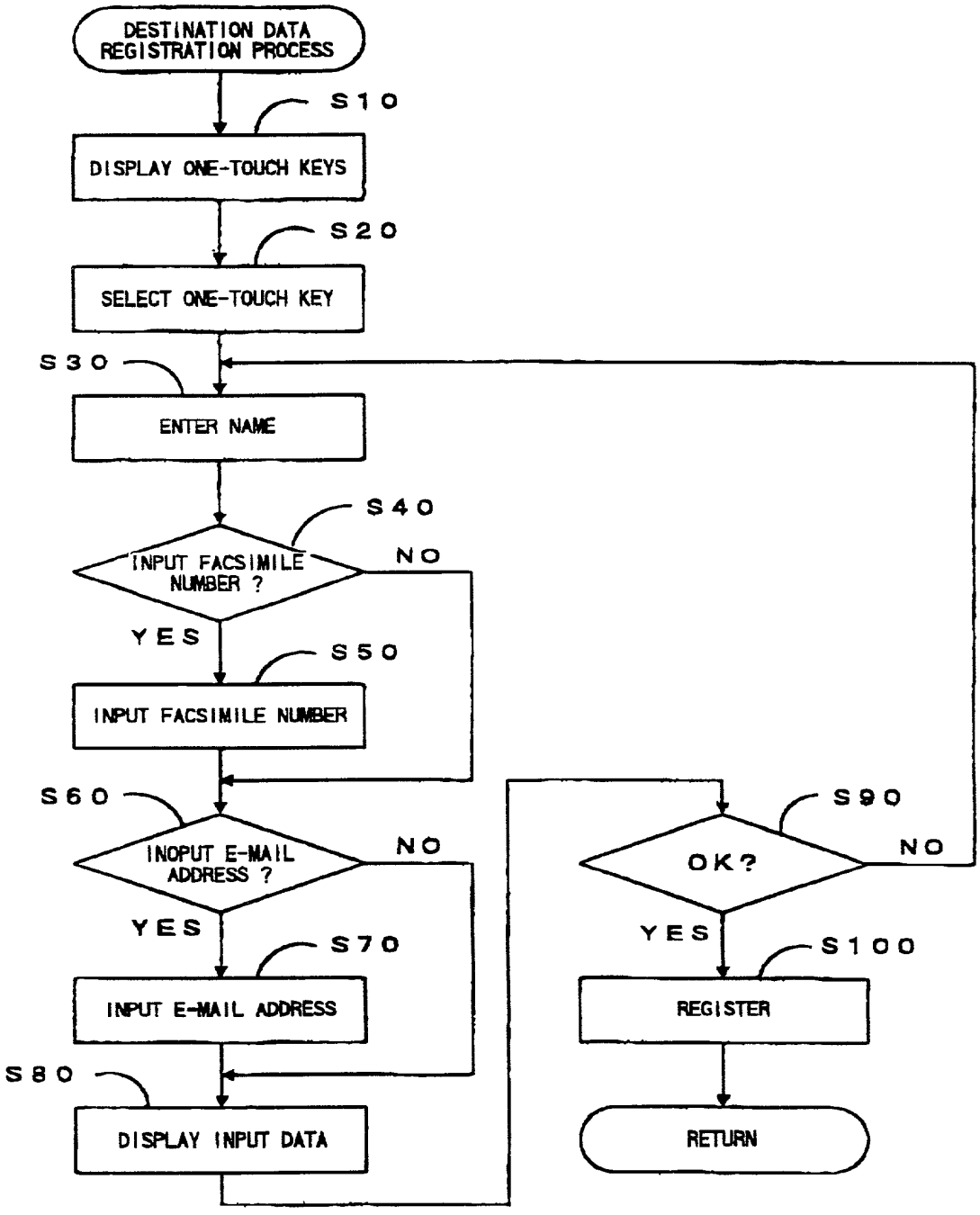

DESTINATION DATA REGISTRATION PROCESS
S10
DISPLAY ONE-TOUCH KEYS
S20
SELECT ONE-TOUCH KEY
S30
ENTER NAME
S40
INPUT FACSIMILE NUMBER ?
NO
YES
S50
INPUT FACSIMILE NUMBER
S60
INOPUT E-MAIL ADDRESS ?
NO
YES
S70
INPUT E-MAIL ADDRESS
S80
DISPLAY INPUT DATA
S90
OK?
NO
YES
S100
REGISTER
RETURN

FIG. 5

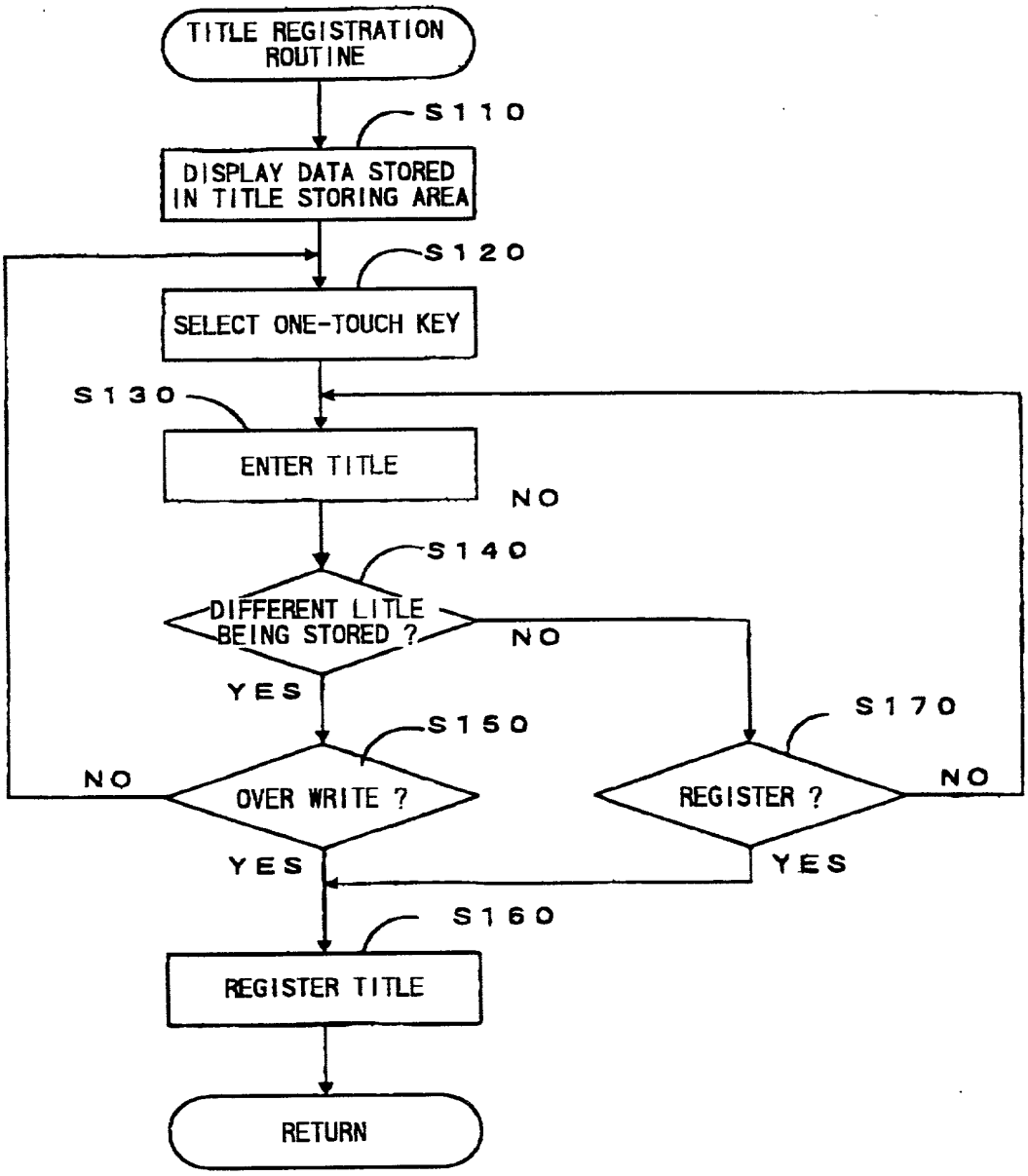

TITLE REGISTRATION ROUTINE
S110
DISPLAY DATA STORED IN TITLE STORING AREA
S120
SELECT ONE-TOUCH KEY
S130
ENTER TITLE
NO
S140
DIFFERENT LITLE BEING STORED ?
NO
YES
S150
OVER WRITE ?
NO
YES
S170
REGISTER ?
NO
YES
S160
REGISTER TITLE
RETURN

FIG. 6

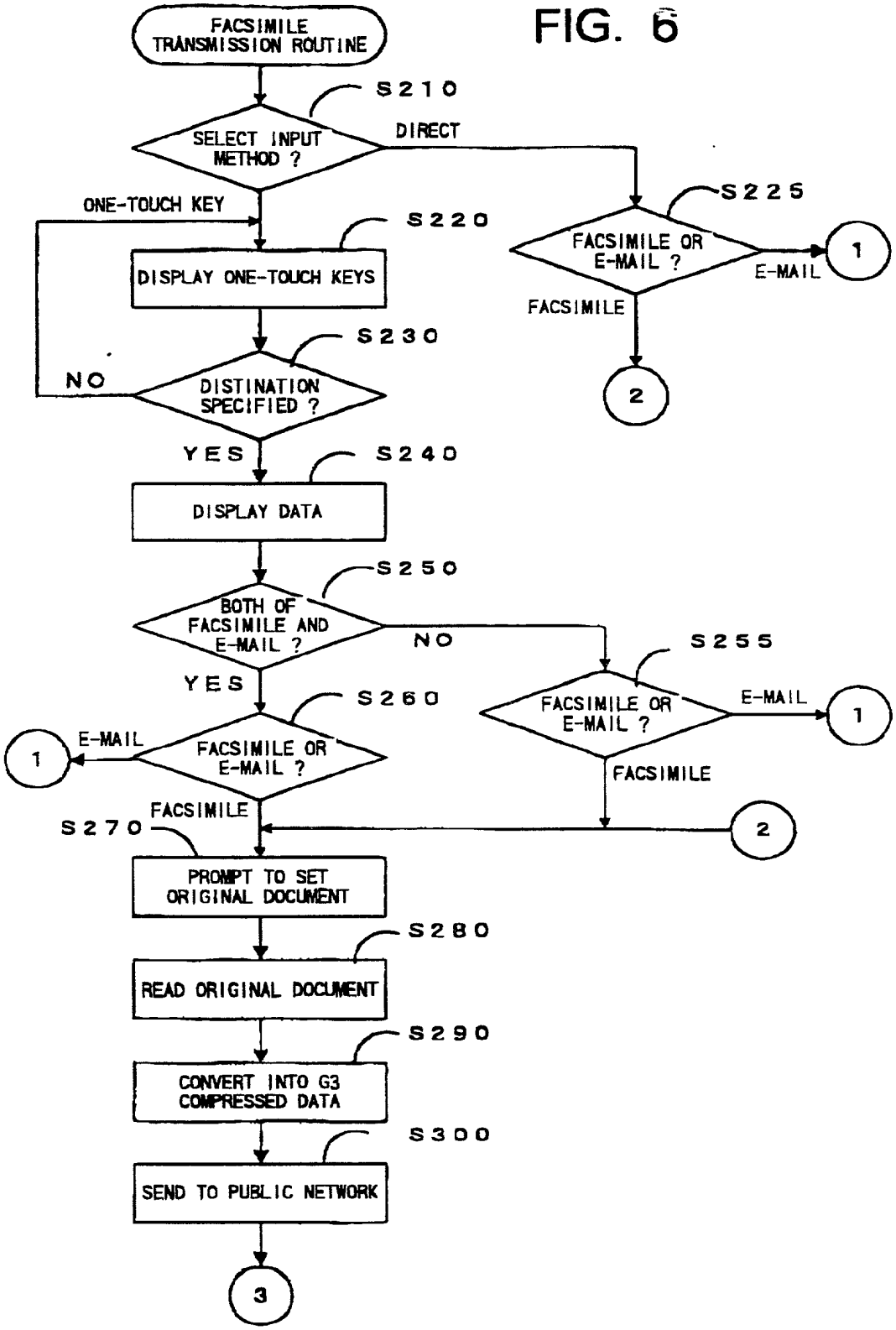

FACSIMILE TRANSMISSION ROUTINE
S210
SELECT INPUT METHOD ?
DIRECT
ONE-TOUCH KEY
S220
DISPLAY ONE-TOUCH KEYS
S230
DISTINATION SPECIFIED ?
NO
YES
S240
DISPLAY DATA
S250
BOTH OF FACSIMILE AND E-MAIL ?
NO
YES
S260
FACSIMILE OR E-MAIL ?
E-MAIL
1
FACSIMILE
S270
PROMPT TO SET ORIGINAL DOCUMENT
S280
READ ORIGINAL DOCUMENT
S290
CONVERT INTO G3 COMPRESSED DATA
S300
SEND TO PUBLIC NETWORK
3
S225
FACSIMILE OR E-MAIL ?
E-MAIL
1
FACSIMILE
2
S255
FACSIMILE OR E-MAIL ?
E-MAIL
1
FACSIMILE
2

FIG. 7

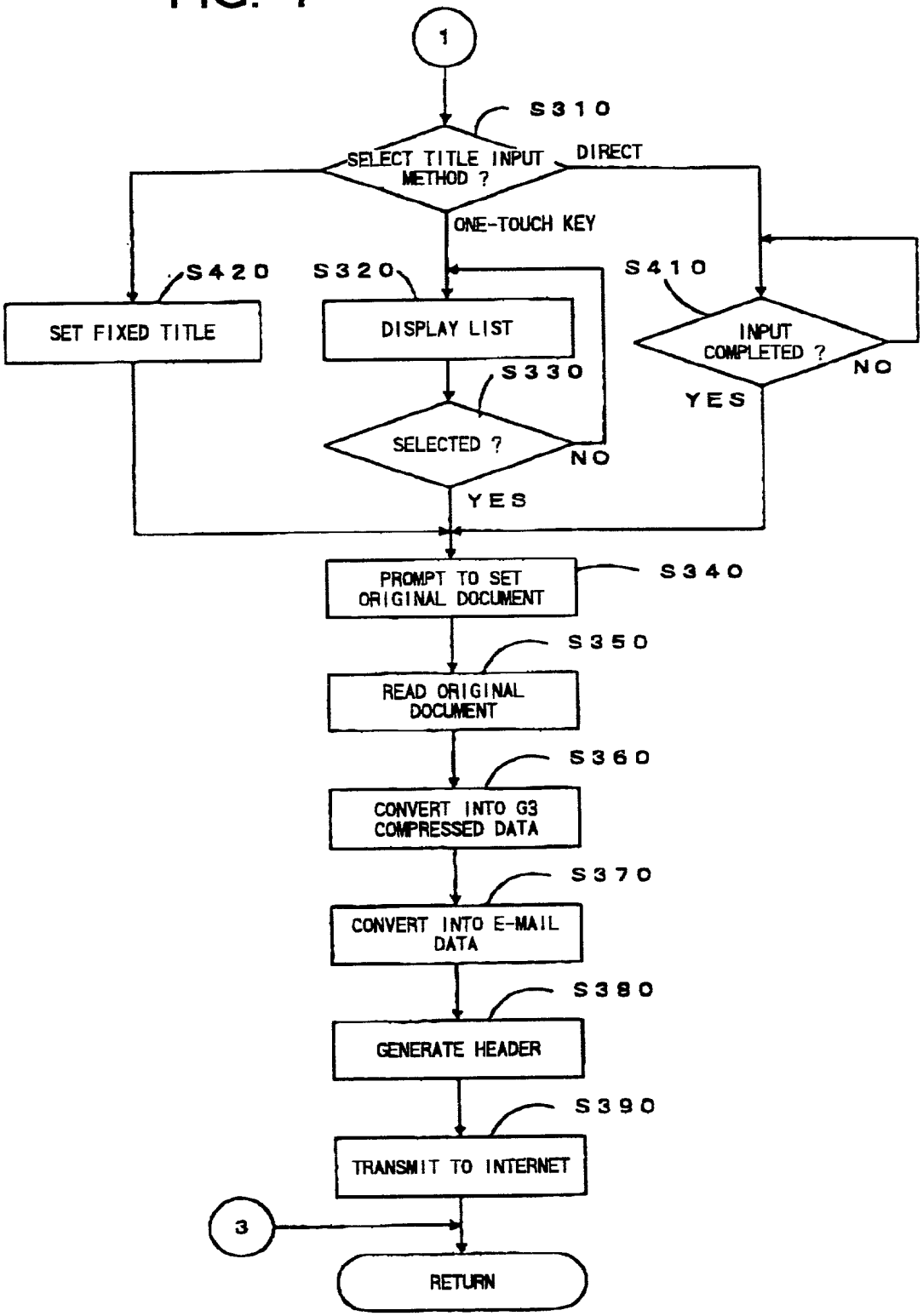

1
S310
SELECT TITLE INPUT METHOD ?
DIRECT
ONE-TOUCH KEY
S420
S320
S410
SET FIXED TITLE
DISPLAY LIST
INPUT COMPLETED ?
NO
YES
S330
SELECTED ?
NO
YES
PROMPT TO SET ORIGINAL DOCUMENT
S340
S350
READ ORIGINAL DOCUMENT
S360
CONVERT INTO G3 COMPRESSED DATA
S370
CONVERT INTO E-MAIL DATA
S380
GENERATE HEADER
S390
TRANSMIT TO INTERNET
3
RETURN

FIG. 8

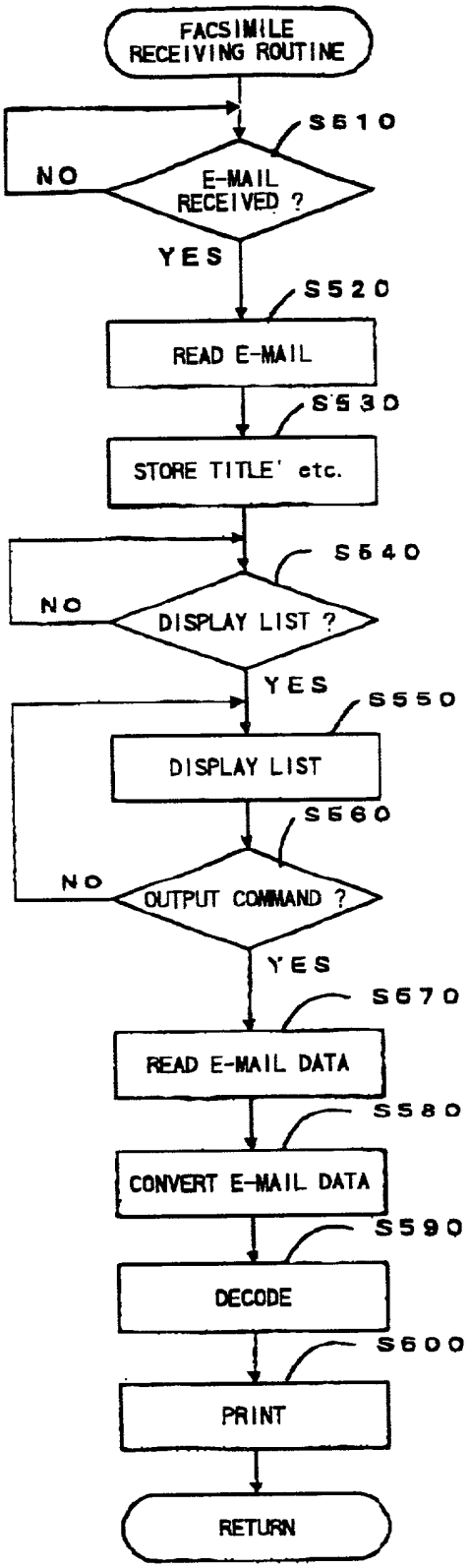

FACSIMILE RECEIVING ROUTINE
S510
NO
E-MAIL RECEIVED ?
YES
S520
READ E-MAIL
S530
STORE TITLE' etc.
S540
NO
DISPLAY LIST ?
YES
S550
DISPLAY LIST
S560
NO
OUTPUT COMMAND ?
YES
S570
READ E-MAIL DATA
S580
CONVERT E-MAIL DATA
S590
DECODE
S600
PRINT
RETURN

FIG. 9

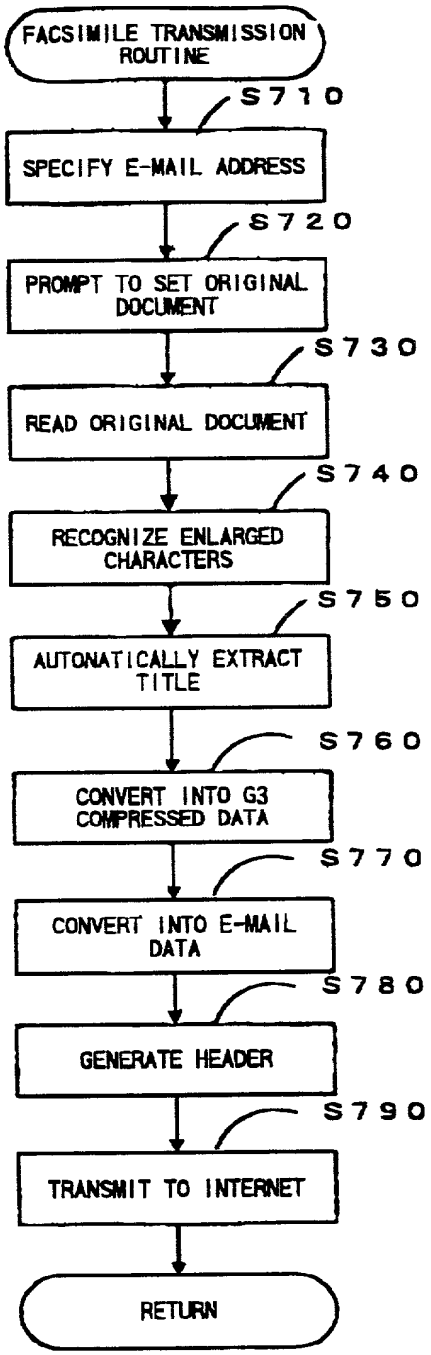

FACSIMILE TRANSMISSION ROUTINE
S710
SPECIFY E-MAIL ADDRESS
S720
PROMPT TO SET ORIGINAL DOCUMENT
S730
READ ORIGINAL DOCUMENT
S740
RECOGNIZE ENLARGED CHARACTERS
S750
AUTONATICALLY EXTRACT TITLE
S760
CONVERT INTO G3 COMPRESSED DATA
S770
CONVERT INTO E-MAIL DATA
S780
GENERATE HEADER
S790
TRANSMIT TO INTERNET
RETURN

FIG. 10

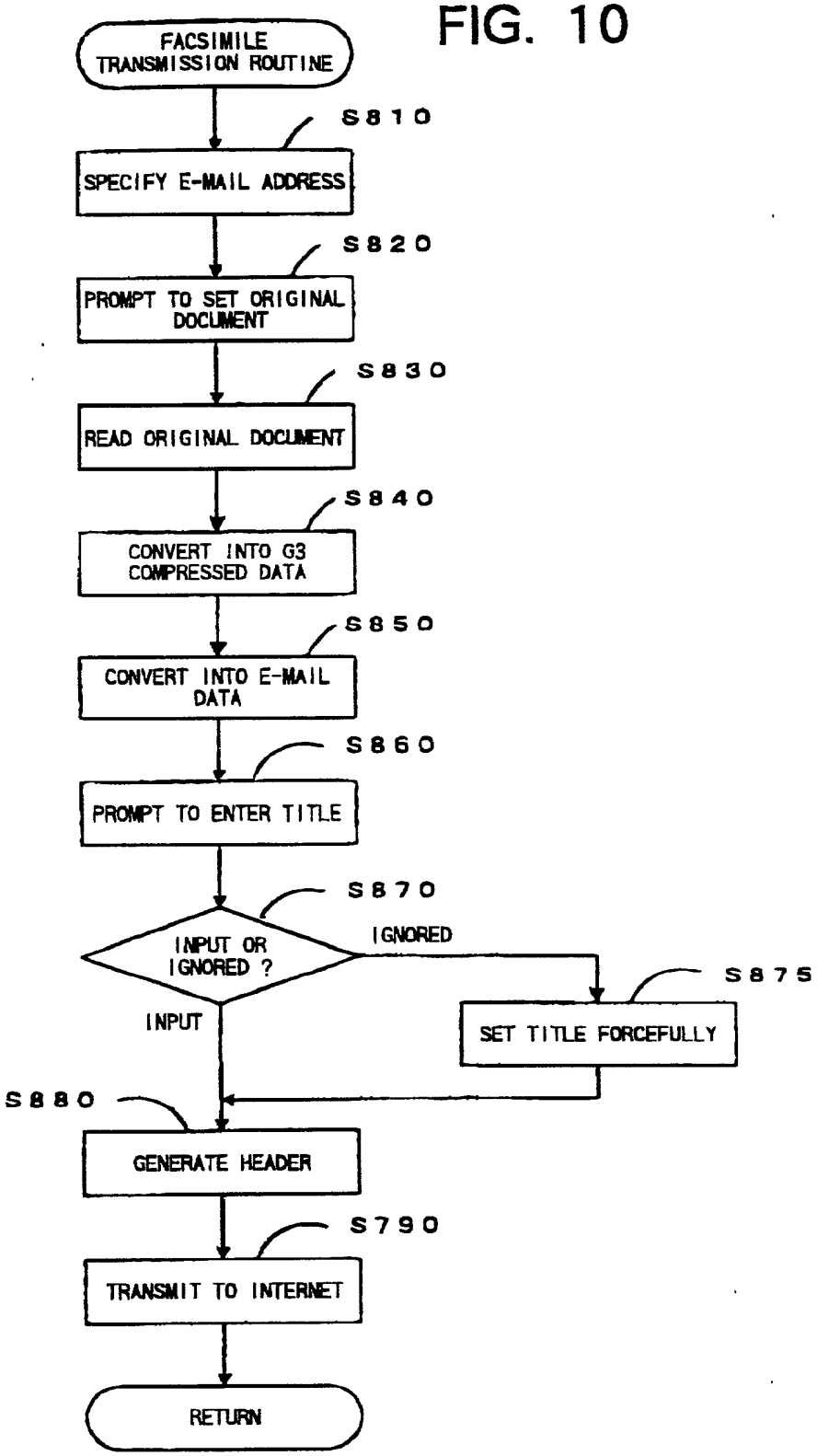

FACSIMILE TRANSMISSION ROUTINE
S810
SPECIFY E-MAIL ADDRESS
S820
PROMPT TO SET ORIGINAL DOCUMENT
S830
READ ORIGINAL DOCUMENT
S840
CONVERT INTO G3 COMPRESSED DATA
S850
CONVERT INTO E-MAIL DATA
S860
PROMPT TO ENTER TITLE
S870
INPUT OR IGNORED ?
IGNORED
S875
SET TITLE FORCEFULLY
INPUT
S880
GENERATE HEADER
S790
TRANSMIT TO INTERNET
RETURN

FIG. 11

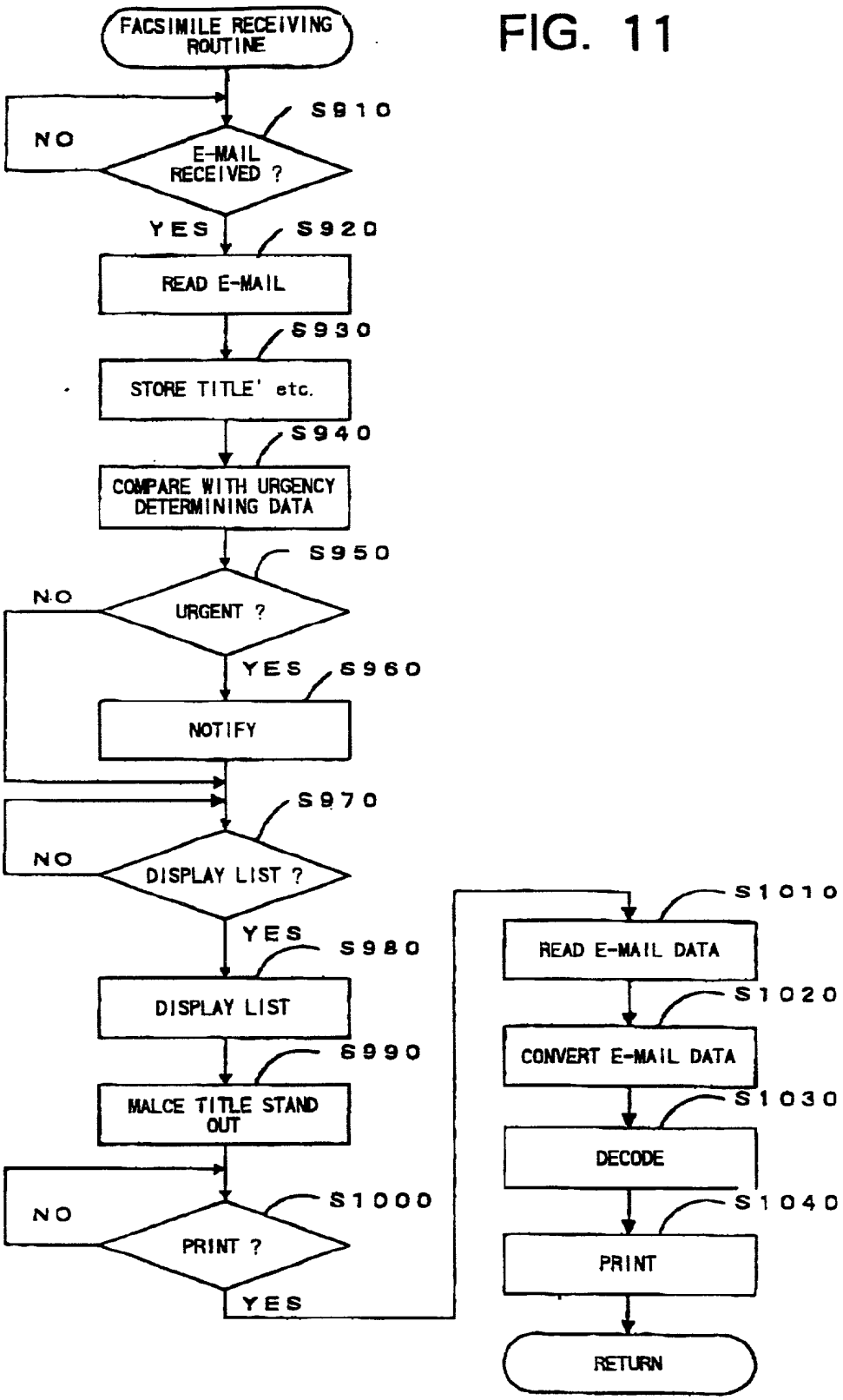

FACSIMILE RECEIVING ROUTINE
S910
NO
E-MAIL RECEIVED ?
YES
S920
READ E-MAIL
S930
STORE TITLE' etc.
S940
COMPARE WITH URGENCY DETERMINING DATA
S950
NO
URGENT ?
YES
S960
NOTIFY
S970
NO
DISPLAY LIST ?
YES
S980
DISPLAY LIST
S990
MALCE TITLE STAND OUT
S1000
NO
PRINT ?
YES
S1010
READ E-MAIL DATA
S1020
CONVERT E-MAIL DATA
S1030
DECODE
S1040
PRINT
RETURN

FIG. 12

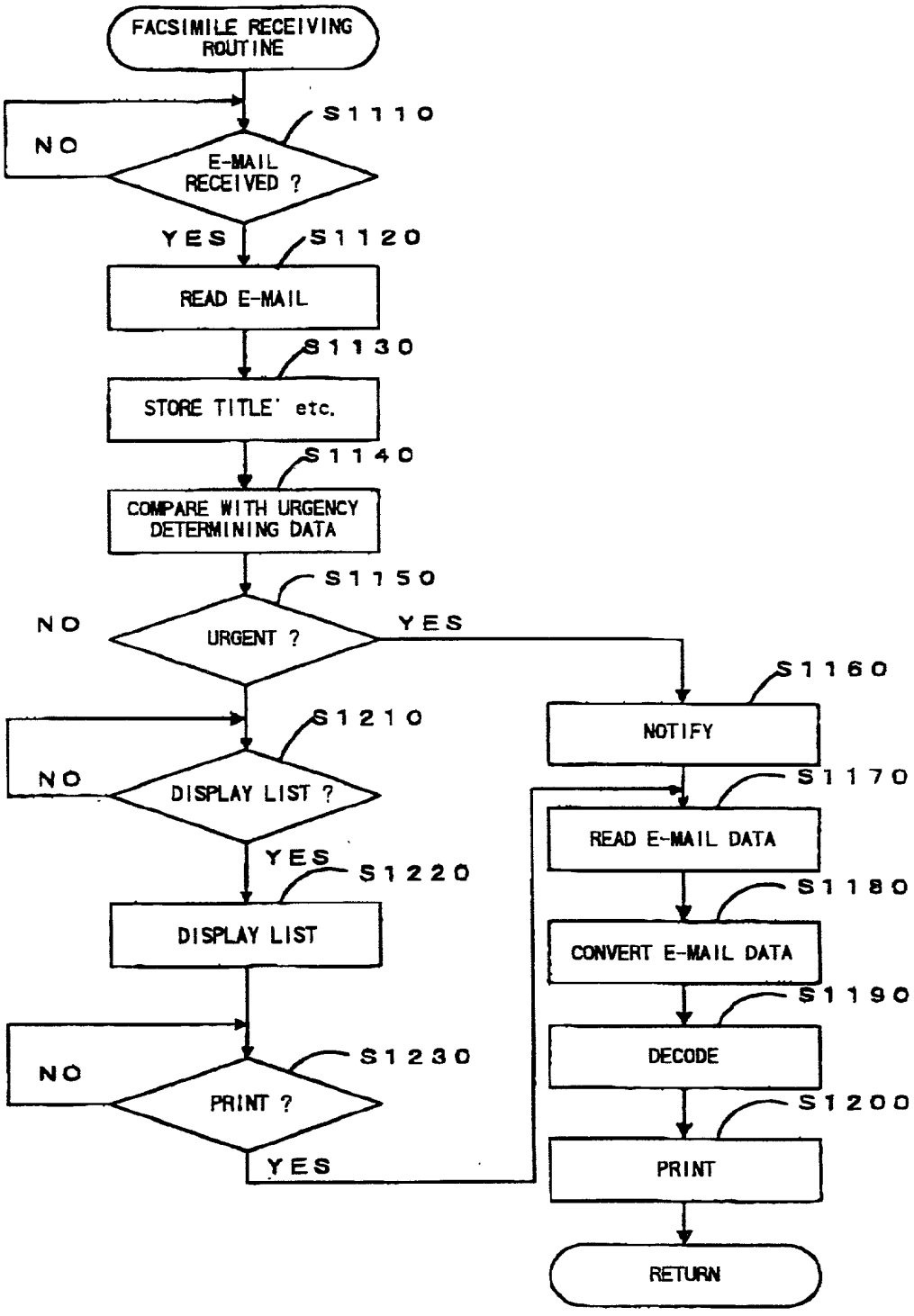
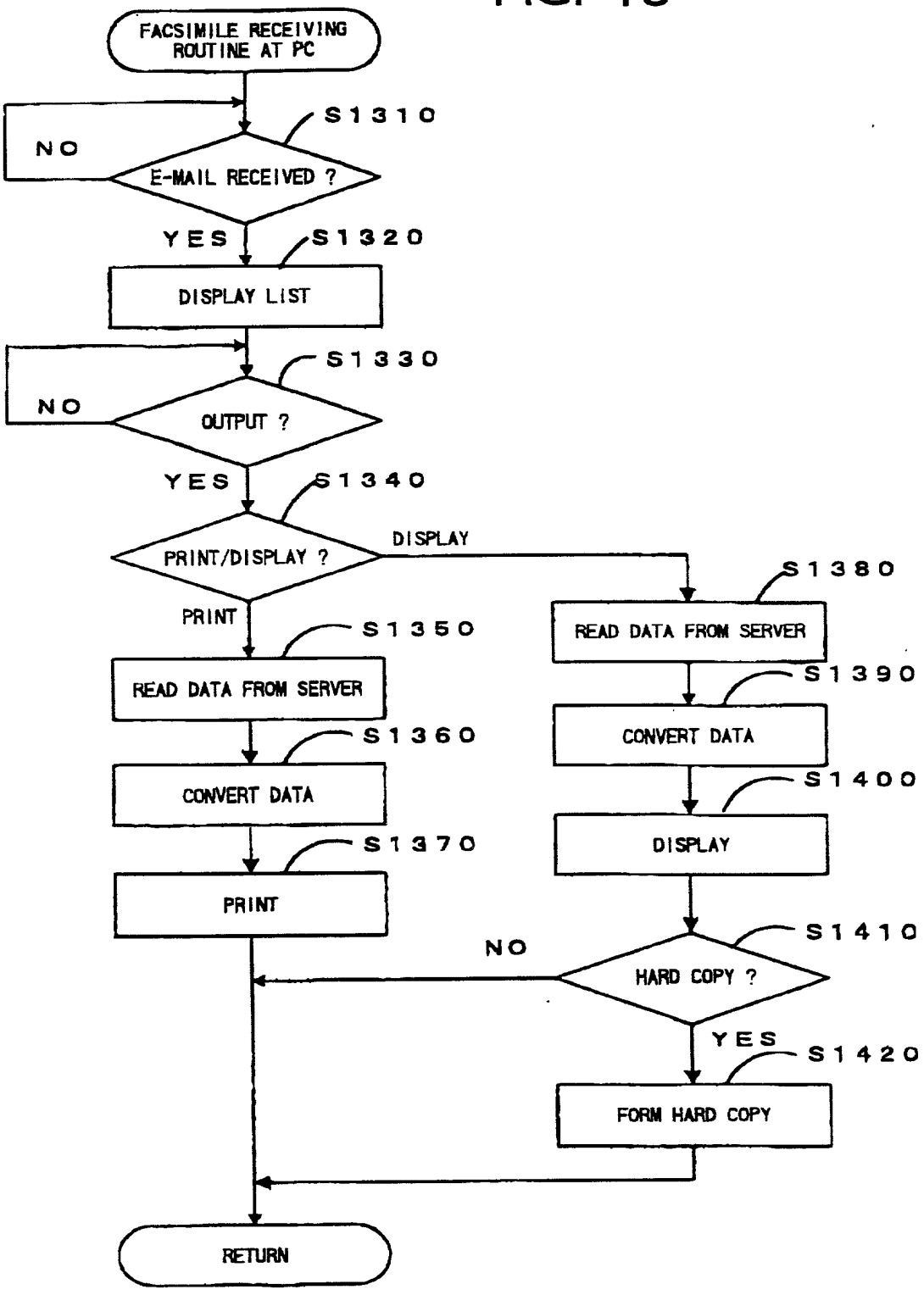
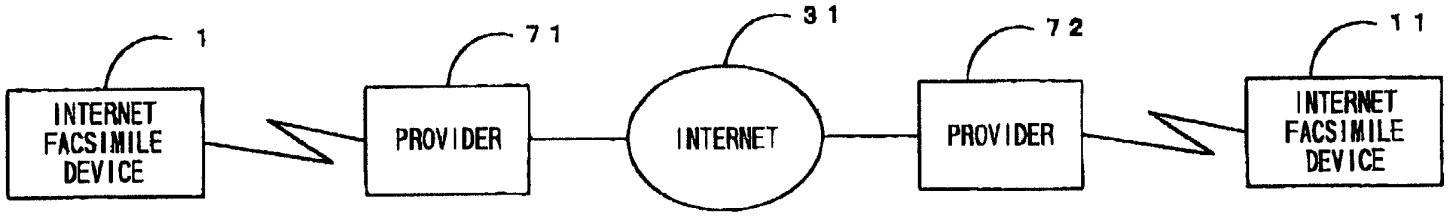

FACSIMILE RECEIVING ROUTINE
S1110
NO
E-MAIL RECEIVED ?
YES
S1120
READ E-MAIL
S1130
STORE TITLE' etc.
S1140
COMPARE WITH URGENCY DETERMINING DATA
S1150
NO
URGENT ?
YES
S1160
NOTIFY
S1210
NO
DISPLAY LIST ?
YES
S1220
DISPLAY LIST
S1230
NO
PRINT ?
YES
S1170
READ E-MAIL DATA
S1180
CONVERT E-MAIL DATA
S1190
DECODE
S1200
PRINT
RETURN

FIG. 13


FACSIMILE RECEIVING ROUTINE AT PC
S1310
NO
E-MAIL RECEIVED ?
YES
S1320
DISPLAY LIST
S1330
NO
OUTPUT ?
YES
S1340
PRINT/DISPLAY ?
DISPLAY
PRINT
S1350
READ DATA FROM SERVER
S1360
CONVERT DATA
S1370
PRINT
S1380
READ DATA FROM SERVER
S1390
CONVERT DATA
S1400
DISPLAY
S1410
NO
HARD COPY ?
YES
S1420
FORM HARD COPY
RETURN

6692TD 2599E260

FIG. 14



Declaration and Power of Attorney for Patent Application
特許出願宣言書兼委任状

Japanese Language Declaration

私は、下欄に氏名を記載した発明者として、以下のとおり宣言する：

私の住所、郵便の宛先および国籍は、下欄に氏名に続いて記載したとおりであり、下記名称の発明に関し、請求の範囲に記載した特許を求める主題の本来の、最初にして唯一の発明者である（一人の氏名のみが下欄に記載されている場合）か、もしくは本来の、最初にして共同の発明者である（複数の氏名が下欄に記載されている場合）と信じ、

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

INTERNET FACSIMILE DEVICE

その明細書を
（該当するものにチェック）
（X）ここに添付する。

（ ）＿＿＿＿年＿＿月＿＿日

出願番号第＿＿＿＿＿＿＿＿＿＿として出願され、

＿＿＿＿＿年＿＿＿＿月＿＿＿＿日補正し、
（該当する場合）

私は、前記のとおり補正した請求の範囲を含む前記明細書の内容を検討し、理解したことを陳述する。

私は、連邦規則法典第37章第１条第56項に従い、本願の特許性の有無について重要な情報を開示すべき義務を有することを認める。

私は、合衆国法典第35章第119条に基づく下記の外国特許出願または発明者証出願の外国優先権利益を主張し、さらに優先権の主張に係わる基礎出願の出願日前の出願日を有する外国特許出願または発明者証出願および/または米国仮出願を以下に明記する：

the specification of which
(check one)
(X) is attached hereto.

() was filed on _____ as

Application Serial No. _____

and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code §119 of any foreign application(s) for patent or inventor's certificate listed below and/or any U.S. provisional application(s) listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior foreign and/or provisional applications 先行外国出願/仮出願			Priority claimed 優先権の主張	
HEI-10-027779 (Number/番号)	Japan (Country/国名)	26/January/1998 (Day/Month/Year Filed/出願年月日)	(X) (Yes/はい)	() (No/いいえ)
(Number/番号)	(Country/国名)	(Day/Month/Year Filed/出願年月日)	() (Yes/はい)	() (No/いいえ)
(Number/番号)	(Country/国名)	(Day/Month/Year Filed/出願年月日)	() (Yes/はい)	() (No/いいえ)
(Number/番号)	(Country/国名)	(Day/Month/Year Filed/出願年月日)	() (Yes/はい)	() (No/いいえ)

私は、合衆国法典第35章第120条に基づく下記の合衆国特許出願の利益を主張し、本願の請求の範囲各項に記載の主題が合衆国法典第35章第112条第1項に規定の態様で先の合衆国出願に開示されていない限度において、先の出願の出願日と本願の国内出願日またはＰＣＴ国際出願日の間に公表された連邦規則法典第37章第１条第56項に記載の所要の情報を開示すべき義務を有することを認める。

I hereby claim the benefit under Title 35, United States code, §120 of any United States application(s) listed below and, in so far as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112. I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No./出願番号)	(Filing Date/出願日)	(Status: Patented, Pending, abandoned/ 現状：特許成立、係属中、放棄済み)
(Application Serial No./出願番号)	(Filing Date/出願日)	(Status: Patented, Pending, abandoned/ 現状：特許成立、係属中、放棄済み)

私は、ここに自己の知識にもとづいて行った陳述がすべて真実であり、自己の有する情報および信ずるところに従って行った陳述が真実であると信じ、さらに故意に虚偽の陳述等を行った場合、合衆国法典第18章第1001条により、罰金もしくは禁錮に処せられるか、またはこれらの刑が併科され、またかかる故意による虚偽の陳述が本願ないし本願に対して付与される特許の有効性を損なうことがあることを認識して、以上の陳述を行ったことを宣言する。

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

委任状：私は下記発明者として、以下の代理人をここに選任し、本願の手続を遂行すること並びにこれに関する一切の行為を特許商標庁に対して行うことを委任する。（代理人氏名および登録番号を明記のこと）

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (*list name and registration number*)

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Inventor's signature/同発明者の署名 Wataru Tomida	Date/日付 Jan. 26, 1999
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Full name of second joint inventor (if any)/第二共同発明者の氏名(該当する場合)	
Second inventor's signature/第二発明者の署名	Date/日付
Residence/住所	
Citizenship/国籍	
Post Office Address/郵便宛先	

Supply similar information and signature for third and subsequent joint inventors.
第三又はそれ以降の共同発明者に対しても同様な情報および署名を提供すること。